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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/428,982    10/28/99    ORLOWSKI    D    P3091

PM82/-1220

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TWO PRUDENTIAL PLAZA  
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EXAMINER

PATEL, V

ART UNIT

PAPER NUMBER

3626

DATE MAILED: 12/20/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

**Office Action Summary**

Application No.

09/428,982

Applicant(s)

ORLOWSKI ET AL.

Examiner

Vishal Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

**Attachment(s)**

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show figure numbers 12 and 13 from the specification on the first line under the heading "Description of the preferred embodiment" as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Correction is required.
2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show figure numbers 16 and 17 from the specification on the second line under the heading "Description of the preferred embodiment" as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Correction is required.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: the numbers 12, 13, 16 and 17. Correction is required.
4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: the numbers 22, 23 and 24. Correction is required.
5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the language in claim 9 "said stator having a plurality of radial grooves formed therein with the walls of the grooves extending between the housing and the shaft; the exterior surface of a first wall

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of the grooves facing the interior of the housing; an axial hole in said in said walls at the extremity of the walls form said shaft connecting said grooves to said cavity" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

### ***Specification***

6. The disclosure is objected to under 37 CFR 1.71, as being so incomprehensible as to preclude a reasonable search of the prior art by the examiner. For example, the following items are not understood: Under the heading "Description of the preferred embodiment" in line 2, "Shaft 15 has a bearing 16 mounted on shaft 15. Rotor 12 is rotated with the shaft 15 by o-ring 17. Stator 13 is affixed to the housing 16 by seal 18", how can 16 represent the bearing and the housing and also when the applicant in the previous line said that the housing is 14.

Applicant is required to submit an amendment which clarifies the disclosure so that the examiner may make a proper comparison of the invention with the prior art.

Applicant should be careful not to introduce any new matter into the disclosure (i.e., matter which is not supported by the disclosure as originally filed).

A shortened statutory period for reply to this action is set to expire thirty days or ONE MONTH, whichever is longer, from the mailing date of this letter.

### ***Claim Objections***

7. Claim 9 is objected to because of the following informalities: part d) "in said in said", one of the in said should be deleted. Appropriate correction is required.

8. Claim 2 is objected to because of the following informalities: line 1, "that", that should be changed to then. Appropriate correction is required.

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9. Claim 18 is objected to because of the following informalities: "though", in line 2.

Appropriate correction is required.

10. Claims 24 and 25 are objected to because of the following: the language of claims 24 and 25 are not in the disclosure.

***Claim Rejections - 35 USC § 112***

11. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2, lines 1-2, "the radial dimension of said stator", the radial dimension from what reference, the end of the shaft or the centerline of the shaft.

12. Claim 2 recites the limitation "the radially dimension of said stator" in line 1-2. There is insufficient antecedent basis for this limitation in the claim.

13. Claim 17 recites the limitation "said cavity" in line 6. There is insufficient antecedent basis for this limitation in the claim.

14. Claim 18 recites the limitation "said cavity" in line 9 of claim 18. There is insufficient antecedent basis for this limitation in the claim.

15. Claim 9 recites the limitation "said cavity" in line 9 of claim 9. There is insufficient antecedent basis for this limitation in the claim.

16. Claim 1 recites the limitation "the walls" and in line 4. There is insufficient antecedent basis for this limitation in the claim.

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17. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9, lines 4-5, "said stator having a plurality of radial grooves formed wherein the walls of the grooves extending between the housing and the shaft" "the exterior surface of a first wall of said grooves facing the interior of the housing", the examiner does know which grooves the applicant is taking about connecting an axial hole. There are no multiple radial grooves connecting the axial hole in the drawings and also there is no mention of plurality of grooves in the specification. How can a first wall exist in multiple of grooves (multiple grooves have multiple walls).

***Claim Rejections - 35 USC § 102***

18. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

19. Claims 1-2 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Kakabaker et al, US Patent No. 4,743,034.

Kakabaker discloses a stator (23) affixed to a housing (17) and surrounding a shaft (13). The stator having a radial groove (groove created in part 23', in figure 5, by the walls 59', 72' and 57') formed therein with the walls of the groove extending between the housing and the shaft (see figure 5). The exterior surface of a first wall (59') of the groove facing the interior of the housing. An axial hole (75, the hole could be a slot or a

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groove, see column 5, lines 45-49) in the first wall at the lower extremity of the wall from the shaft connecting the groove to the housing. The radial groove is more than one-half the radial dimension of the stator, as much as claimed by the applicant.

Regarding claim 9: The stator having a plurality of radial grooves formed therein with the walls of the grooves extending between the shaft and the housing (groove 65, including wall 65 and the adjacent walls thereof).

20. Claims 1-6 and 9-14 18- are rejected under 35 U.S.C. 102(b) as being anticipated by Orlowski, Patent No. 5,174,583.

Orlowski discloses a stator (12) affixed to a housing (50) and surrounding a shaft (100). The stator having a radial groove (groove 14 created from the wall 20 and adjacent walls thereof) formed therein with the walls of the groove extending between the housing and the shaft (see figure 1). The exterior surface of a first wall (wall having the groove 20) of the groove facing the interior of the housing. An axial hole (groove 20) in the first wall at the lower extremity of the wall from the shaft connecting the groove to the housing. The radial groove is more than one-half the radial dimension of the stator, as much as claimed by the applicant (see figure 2). The hole in the first wall of the stator includes a axially sloping surface connecting the radial groove to the housing (bottom of 20). The hole and the sloping surface are elongated (the hole has a depth and so does the sloping surface). The hole and the sloping are milled in the first wall. The inside diameter of the stator is proportional to the diameter of the shaft.

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Regarding Claims 9-14: The stator having a plurality of radial grooves formed there in with the walls of the grooves extending between the housing and shaft (the two radial grooves 14).

Regarding Claims 18-26: A rotor (24) affixed to the shaft and rotating therewith interfacing with the stator (see figure 1). The interface between the rotor and the stator includes an ejection port (near 28, see figure 2) for ejecting of contaminants from the exterior without reaching the housing. The contaminants are expelled by the pumping action between the rotor and the stator, as much as claimed by the applicant (see figure 1). The rotor surrounds the stator and prohibits the entry or exit and subsequent contaminants (the elongated piece of stator received in the rotor at the front face near 24).

***Claim Rejections - 35 USC § 103***

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

22. Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orlowski et al, Patent No. 5,174,583.

Orlowski discloses the claimed invention except for the proportion between the stator and the shaft is .005 inches per inch of shaft diameter. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the proportion between the stator and the shaft to be .005 inches per inch of shaft diameter,



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since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

23. Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orlowski and in view of Kakabaker.

Orlowski discloses the invention substantially as claimed above but does not disclose the hole and the sloping surface are elongated circumferentially (meaning that they create a slot). Kakabaker et al disclose that a drain could be either a hole or a slot (column 5, lines 45-50). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the hole and the sloping surface of the drain of Orlowski to be elongated circumferentially as taught by Kakabaker, since they are considered to be art equivalent.

24. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Orlowski et al as applied to claim 1 above, and further in view of Fedorovich et al, Patent No. 5431,414.

Regarding claim 17: Orlowski et al disclose the invention substantially as claimed above but does not disclose a plurality of axial holes in the first wall. Fedorovich et al disclose that an axial hole in a first wall (figure 2) or a plurality of axial holes in a first wall (figure 8). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the axial hole of Orlowski to be a plurality of axial holes as taught Fedorovich, since there are considered to be art equivalent.

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***Conclusion***

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Orlowski and Fedorovich, both disclose a stator a drain and a groove.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is 703-308-8495. The examiner can normally be reached on 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-3687 for regular communications and 703-308-3687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.

VP  
December 16, 2000

  
**LYNNE H. BROWNE**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 3620**